

PROJECT DESCRIPTION

Kalalé Pilot Solar Market Garden Project

I. Introduction

This appendix describes the activities to be undertaken and the results to be achieved with the funds obligated under this Agreement. Nothing in this Appendix A shall be construed as amending any of the definitions, conditions, or terms of the Agreement.

II. Background

ADESCA was founded in 2007 as a nongovernmental organization with the purpose of providing extension and training services to smallholder farmers and women's groups in Kalalé Commune, Benin. The organization supports the formation and management of women's vegetable producer groups and provides extension services to expand the use of improved crop varieties, drip irrigation, and solar power technologies in the commune.

The commune of Kalalé is located in an isolated area of northern Benin, where development assistance has been limited and food insecurity has reached acute levels. High rates of malnutrition are aggravated by the near absence of vegetables in the local diet. The commune enjoys a high solar index during the dry season, but dependence on rain-fed agriculture and lack of familiarity with best practices in cultivating improved horticulture products prevents local producers from fully exploiting the commune's agricultural potential. The German Institute for Development through its Local Intervention for Food Security Program has been introducing improved varieties of local vegetables such as tomato, cabbage, and pepper to the gardening associations in Kalalé. Four of the commune's vegetable marketing groups, made up of 130 women from the Boo and Gando minorities, would like to take advantage of the opportunity to cultivate the improved vegetable varieties introduced by the Local Intervention for Food Security Program. However, the crop cultivation requires irrigation and technical expertise which the women lack.

III. Funding

A. ADF Contribution

The financial plan for ADF's contribution is set forth in Appendix A-1 to this Agreement. The Parties may make changes to the financial plan without formal amendment, if such changes are made in accordance with Article 8 of the Agreement and do not cause ADF's contribution to exceed the obligated amount specified in Article 4, Section 4.1 of the Agreement.

B. Client Contribution

The four participating women's groups will each contribute 0.5 hectares of land in the villages of Délassi, GnelBoucatou, Kourel, and Péonga in Kalalé commune. The group members will also contribute labor as needed to carry out production activities.

IV. Project Goal

The goal of this Project is to improve the nutritional status and living conditions of residents of Kalale Commune.

V. Project Purpose

The purpose of this Project is to increase the value of fruits and vegetables produced by the participating women for consumption and sales from CFA 2,124,000 in the year before the Project and in Year 1 to:

- A. CFA 18,000,000 in Year 2; and
- B. CFA 21,000,000 in Year 3.

VI. Outputs

The Project will result in the following outputs.

- A. Total cash sales revenues of the participating members derived from the Project will increase from CFA 0 at present to:
 - 1. CFA 15,000,000 in Year 2; and
 - 2. CFA 17,000,000 in Year 3.
- B. Technical capabilities of the four participating groups will be strengthened, as evidenced by the following:
 - 1. year-round production of high value vegetable and tree crops by the group members; and
 - 2. production of high value vegetable and tree crop seed produced by group members.
- C. The four groups will generate sufficient cash income from member fees and commissions to fully cover the cost of equipment maintenance and replacement, and the purchase of inputs needed for production at full capacity, by Year 3 of the Project.

VII. Activities

The Project will replicate the Africa Market Garden concept using solar technologies, in which a package of technologies including a low pressure drip irrigation system, agricultural inputs and improved crop practices will be developed on four production sites with the technical assistance of the International Crops Research Institute for the Semi Arid Tropics (ICRISAT) and the Solar Electric Light Fund (SELF). The use of high efficiency solar powered pumps for irrigation from shallow wells will be field tested by this Project. As a result, the four participating women's associations of Dérassi, GnelBoucatou, Kourel, and

Péonga will be able to develop vegetable crops and fruit trees on their respective production sites in Kalalé commune.

A. Infrastructure, Working Capital and Equipment

1. ADESCA will work with the four participating women's associations to participate in the African Market Garden (AMG) concept whereby 0.5 hectares of low pressure drip irrigation system will be installed on each of the four production sites to produce vegetable and tree crops on a year-round basis.
2. During the first month of the Project, ADESCA will work with the participating women's groups to level and fence the sites where vegetable and fruit tree crops will be developed for drip irrigation. Moringa seedlings will be established, and selected fruit trees will be planted to serve as mother trees for grafting operations.
3. ADESCA and the participating groups will install on each of the four production sites a solar pumping system to pump water into a raised reservoir to provide adequate pressure for the drip irrigation system.
4. ADF will provide the four participating groups with working capital to purchase vegetable seeds and fruit tree seedlings, fertilizers, and ADF-approved pesticides to initiate production on the irrigated perimeter; small gardening tools for the participating members; and funds for labor needed for initial clearing and stumping of the production sites.
5. The four groups will each acquire one motorized tricycle and helmet for use in transporting inputs and produce to and from the gardens.

B. Technical Assistance

1. ADESCA will recruit qualified consultants to provide financial management and internal control training to its staff to ensure that ADESCA maintains bookkeeping and reporting systems consistent with ADF requirements; to provide training in community project design and association management to ADESCA staff.
2. ADESCA will contract with the International Crops Research Institute for the Semi Arid Tropics (ICRISAT) and with the Solar Electric Light Fund (SELF) to provide project planning and coordination, supervision of drip irrigation installation, training of the technical supervisor, and farmers, and technical monitoring services to the four participating groups, as well as strengthen ADESCA's own capacity to implement and manage similar production systems. ADESCA will obtain ADF approval of the contracts signed with ICRISAT and with SELF prior to disbursement of funds for these services.
3. ICRISAT will conduct at least seven visits to Kalalé to monitor establishment of the market gardens, and to train the participating members

in composting, nursery management, bed preparation, irrigation management, planting techniques, fertilizer and authorized pesticide use, harvest, storage, seed production and marketing.

4. The four participating groups will each send five members on an exchange visit to drip irrigation sites in Bessassi and Dunkassa.

VIII. Roles and Responsibilities of the Parties

ADESCA has primary responsibility for ensuring that the Project's activities are properly implemented. ADF's Partner in Benin will provide technical support and guidance.

IX. Monitoring and Evaluation

Within sixty days of the effective date of this Agreement, ADESCA, working with the ADF Benin Partner, will establish a Project monitoring plan, including market analyses, to ensure that the Project follows the implementation plan and that problems identified through monitoring and evaluation are adequately addressed in a timely manner.